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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 500.00

Complete if Known	
Application Number	09/966,802
Filing Date	September 28, 2001
First Named Inventor	Arthur Sheiman
Examiner Name	D. Malzahn
Art Unit	2193
Attorney Docket No.	42.P10700

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☑ Deposit Account Deposit Account Number: 50-0221 Deposit Account Name: Intel Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☑ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
0 - 20 or HP =	0 x		= 0

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
0 - 3 or HP =	0 x		= 0

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims Fee ($)	Multiple Dependent Claims Fee Paid ($)

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
- 100 =	/ 50 =	(round up to a whole number) x		=

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other (e.g., late filing surcharge): Appeal Brief Fee	$ 500.00

SUBMITTED BY

Signature	Alan Pedersen-Giles	Registration No. (Attorney/Agent) 39,996	Telephone 703-633-1061
Name (Print/Type)	Alan Pedersen-Giles		Date August 15, 2005

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FAX

Urgent and Confidential

Date: August 15, 2005

TO:	**USPTO**	
	Examiner	D. Malzahn
	Art Unit	2193
	Fax Number	571-273-8300
FROM:	**Alan Pedersen-Giles**	
	Fax Number	703-633-3303
	Phone Number	703-633-1061
SUBJECT:	Application Number	09/966,802
	Inventor(s)	Arhur Sheiman et al.
	Date Filed	9/28/2001
	Docket Number	42.P10700
	Title	Time Varying Filter With Zero And/Or Pole Migration

INCLUDED IN THIS TRANSMISSION:

Fax Cover Sheet	1 page
Fee Transmittal	1 page
Transmittal	1 page
Appeal Brief	12 pages

I hereby certify that the above listed correspondence is being facsimile transmitted to the USPTO to:.

Mail Stop: Commissioner for Patents, PO BOX 1450, Alexandria, VA 22313-1450 on **August 15, 2005**.

Cathy Dikes Cathy Dikes

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 15

Application Number	09/966,802
Filing Date	September 28, 2001
First Named Inventor	Arthur Sheiman
Art Unit	2193
Examiner Name	D. Malzahn
Attorney Docket Number	42.P10700

ENCLOSURES *(Check all that apply)*

- [✓] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [✓] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [✓] Other Enclosure(s) (please identify below):
  Fax cover sheet

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Intel Americas		
Signature	Alan Pedersen-Giles		
Printed name	Alan Pedersen-Giles		
Date	August 15, 2005	Reg. No.	39,996

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Signature	Cathy Dikes		
Typed or printed name	Cathy Dikes	Date	August 15, 2005

PATENT
Attorney Docket No. 42.P10700

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of	)	
	)	
Arthur Sheiman et al.	)	Group Art Unit: 2193
	)	
Application No.: 09/966,802	)	Examiner: D. Malzahn
	)	
Filed: September 28, 2001	)	
	)	
For: TIME VARYING FILTER WITH ZERO AND/OR POLE MIGRATION	)	

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellants submit herewith an Appeal Brief as required by 37 C.F.R. § 41.37. This Appeal Brief is in response to the Final Office Action dated March 14, 2005 and the Advisory Action dated May 23, 2005.

I. REAL PARTY IN INTEREST

The real party in interest is Intel Corporation, a corporation of Delaware.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellants which relate to, directly affect or are directly affected by the Board's decision in this appeal.

III. STATUS OF THE CLAIMS:

Claims 1, 2, 4-8, 10-14, 16-27, and 30-33 are pending in the application.

Claims 1, 7, 13, and 19-22 stand finally rejected under 35 U.S.C. § 102(b) as being anticipated by Sakata et al. (U.S. Patent No. 5,140,541). Claims 2, 4-6, 8, 10-12, 14, 16-18, 23-27, and 30-33 stand allowable if rewritten in independent form.

The rejections of claims 1, 7, 13, and 19-22 are appealed. These rejected claims are reproduced in the attached Claims Appendix. The allowable claims, 2, 4-6, 8, 10-12, 14, 16-18, 23-27, and 30-33, are not reproduced in the Claims Appendix, because they are not "involved in the appeal" (37 C.F.R. § 41.37(c)(1)(vii)).

IV. STATUS OF AMENDMENTS:

A Response After Final was filed on April 1, 2005, but it contained no proposed amendments.

V. SUMMARY OF THE INVENTION:

Regarding independent claims 1, 13, 19, 21, and 22, a method may include filtering a segment of a signal using a filter and disengaging the filter in a sequence of graduated steps at the end of the segment (Figs. 1 and 2; page 4, line 19, through page 6, line 9). Regarding independent claims 7, 13, 20, 21, and 22, a method may include engaging a filter in a sequence of graduated steps at the beginning of a signal segment and filtering the segment of the signal using the filter (Figs. 4 and 5; page 9, line 11, through page 10, line 11). Regarding claims 1, 7, 13, and 19-21, filters may be disengaged at the end of signal segments and engaged at the beginning of the next segments. This may be repeated until the entire input signal has been processed (page 23, lines 10-14).

VI. GROUND OF REJECTION:

A. Claims 1, 7, 13, and 19-22 stand finally rejected under 35 U.S.C. § 102(b) over Sakata et al.

VII. ARGUMENT:

A. Claims 1, 7, 13, and 19-22 are patentable under 35 U.S.C. § 102(b) over Sakata et al.

Appellants first note that in three Office Actions, the Examiner has cited only once to the Abstract of Sakata et al. in its entirety (Non-final Office Action mailed August 18, 2004, page 2, numbered section 2, line 5). Other than this non-specific citation to the Abstract, no specific reading of the claims or other evidence from Sakata et al. has been provided. The Examiner has violated the requirement of 37 C.F.R. § 104(c)(2) that "the particular part [of the reference] relied on must be designated as nearly as practicable."

The rejection of claims 1, 7, 13, and 19-22 is facially deficient, because the Examiner has not made a *prima facie* case of anticipation. As the Federal Circuit has noted,

> As adapted to ex parte procedure, Graham [v. John Deere Co.] is interpreted as continuing to place the 'burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103'.

In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967)). The Examiner has not established a *prima facie* case by producing the required factual basis for the rejection of claims 1, 7, 13, and 19-22. Rather, the Examiner has provided only a bare allegation that the references anticipate the claims, which does not establish the required "factual basis" needed for a *prima facie* case of anticipation. The rejection of all appealed claims, 1, 7, 13, and 19-22, should be reversed for at least this reason.

The lack of a *prima facie* case of anticipation for all claims notwithstanding, certain ones of claims 1, 7, 13, and 19-22 will be argued separately in the following subheadings.

1. Claims 1 and 19:

a. Disengaging a filter not disclosed:

Appellants respectfully traverse the § 102(b) rejection of claims 1 and 19 over Sakata et al. Independent claims 1 and 19 require a method and article including, *inter alia*, "disengaging [a] filter in a sequence of graduated steps at the end of the segment." Sakata et al. fails to disclose all elements of the method and article in claims 1 and 19.

M.P.E.P. § 2111.01 states that "the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification." In the Amendment filed

November 17, 2004, Appellants explained that the claim term "disengaging" is defined[1] in the specification to mean changing a filter *to* a neutralized or ineffective state. The Final Office Action does not dispute this definition of "disengaging."

Rather, page 2 of the Final Office Action and the Advisory Action postulate a "first filter" at a point when a filter has a first set of coefficients and a "second filter" when the same filter has a second set of coefficients. Then, the Final Office Action reasons, when the second filter is operational, the first filter has been disengaged. This argument does not comport with the actual teachings of Sakata et al.

Sakata et al. teaches only a single, physical filter (e.g., filter 108 in Fig. 1 or filter 300 in Fig. 18, which will be discussed from here on). Sakata et al. also teaches adjusting the cutoff frequency of filter 300 (see Fig. 10), but it does not disclose filter 300 being neutralized or ineffective at any time (i.e., "disengaging" as claimed). Because no evidence has been provided that either filter 108 or filter 300 in Sakata et al. is disengaged in a sequence of graduated steps, a *prima facie* case of anticipation has not been established. Thus, the § 102(b) rejection of claims 1 and 19 is improper and should be reversed.

Even if Sakata et al. taught a first filter at a first point in time and a second filter at a later time (which it does not as explained above), changing the cutoff frequency does not neutralize or render effective (i.e., disengage) the earlier-in-time filter. This will be explained with regard to Fig. 10 in Sakata et al. which illustrates frequency responses for a number of filter coefficients. Where, for example, the cutoff frequency changes, the "first filter" remains operational, because it continues to operate (i.e., stop certain frequencies) over at least a portion of its previous effective frequency range. Thus, even under the interpretation on page 2 of the Final Office Action, Sakata et al. fails to teach disengaging the "first filter" (as postulated by the Examiner), because filter 108 or 300 remains operational both before and after its coefficients change. Hence, it is not "disengage[ed] . . . in a sequence of graduated steps," as required by claims 1 and 19.

Because no evidence has been provided that either filter 108 or filter 300 in Sakata et al. meets the "disengaging" claim language, a *prima facie* case of anticipation has not been

[1] See application page 4, lines 8-10, likening "disengagement" to "removal" and "switching . . . off." See also application page 6, lines 8 and 9, likening "disengaged" to "a filter which has no effect."

established. Hence, the § 102(b) rejection of claims 1 and 19 is improper and should be reversed.

b. Disengaging a filter at the end of the segment not disclosed:

No evidence has been provided that Sakata et al. discloses disengaging a filter in a sequence of graduated steps "at the end of the segment," as required by claims 1 and 19. Because no evidence has been produced, a *prima facie* case of anticipation has not been established. Nor can such a case be established, because Sakata et al. (e.g., Fig. 30 and its associated description) fails to disclose disengaging a filter "at the end of the segment" as set forth in the claims. The § 102(b) rejection of claims 1 and 19 is improper and should be reversed for this additional reason.

2. Claims 7 and 20:

a. Engaging a filter not disclosed:

Appellants respectfully traverse the § 102(b) rejection of claims 7 and 20 over Sakata et al. Independent claims 7 and 20 require a method and article including, *inter alia*, "engaging a filter in a sequence of graduated steps at the beginning of a signal segment." Sakata et al. fails to disclose all elements of the method and article in claims 7 and 20.

In the Amendment filed November 17, 2004, Appellants explained that the claim term "engaging" is defined[2] in the specification to mean changing a filter *from* a neutralized or ineffective state. The Final Office Action does not appear to dispute this definition of "engaging." Instead, the Final Office Action and Advisory Action call a single, physical filter a "first filter" at time A and a "second filter" at time B. This argument does not comport with the actual teachings of Sakata et al.

Sakata et al. teaches only a single, physical filter (e.g., filter 108 in Fig. 1 or filter 300 in Fig. 18, which will be discussed from here on) that is always operational. Sakata et al. also teaches adjusting the cutoff frequency of filter 300 (see Fig. 10), but it does not disclose filter 300 being neutralized or ineffective at any time. No evidence has been provided to date that filter 300 changes from a neutralized or ineffective state (i.e., "engaging" as claimed). All that

[2] See application page 4, lines 8-10, likening "engagement" to "insertion" and "switching on." See also application page 9, lines 11 and 12, stating "The inverse of neutralizing a filter is engaging, or enabling, a filter."

Sakata et al. discloses is that filter 300, for example, changes from one operational or "on" state to another operational or "on" state.

Because no evidence has been provided that either filter 108 or filter 300 in Sakata et al. meets the "engaging" limitation, a *prima facie* case of anticipation has not been established. Thus, the § 102(b) rejection of claims 7 and 20 is improper and should be reversed.

b. Engaging a filter at the beginning of a signal segment not disclosed:

No evidence has been provided that Sakata et al. discloses engaging a filter in a sequence of graduated steps "at the beginning of a signal segment," as required by claims 7 and 20. Because no evidence has been produced, a *prima facie* case of anticipation has not been established. Nor can such a case be established, because Sakata et al. (e.g., Fig. 30 and its associated description) fails to disclose engaging a filter "at the beginning of a signal segment" as set forth in the claims. The § 102(b) rejection of claims 7 and 20 is improper and should be reversed for this additional reason.

3. Claim 13:

In addition to the reasons given above in sections VII(A)(1) and VII(A)(2), claim 13 is allowable for the following reasons.

a. Engaging, filtering, and disengaging a filter not disclosed:

Appellants respectfully traverse the § 102(b) rejection of claim 13 over Sakata et al. Independent claim 13 requires a method including, *inter alia*, "engaging a filter in a sequence of graduated steps at the beginning of a signal segment; filtering the segment of the signal using the filter; and disengaging the filter in a sequence of graduated steps at the end of a signal segment." Sakata et al. fails to disclose all elements of the method in claim 13.

No evidence has been provided that Sakata et al. discloses *both* engaging a filter in a sequence of graduated steps "at the beginning of a signal segment" *and* disengaging the filter in a sequence of graduated steps "at the end of a signal segment," as required by claim 13. Because no evidence has been produced, a *prima facie* case of anticipation has not been established. The § 102(b) rejection of claim 13 should be reversed at least for lack of evidence.

Nor can such a case be established, because Sakata et al. fails to disclose engaging and disengaging a filter at the beginning and end of a signal segment as set forth in claim 13. The § 102(b) rejection of claim 13 is improper and should be reversed for this additional reason.

4. Claim 21:

In addition to the reasons given above in sections VII(A)(1) and VII(A)(2), claim 21 is allowable for the following reasons.

a. Disengaging then engaging a filter not disclosed:

Appellants respectfully traverse the § 102(b) rejection of claim 21 over Sakata et al. Independent claim 21 requires an article including, *inter alia*, "disengaging the filter in a sequence of graduated steps at the end of the segment; and engaging a filter in a sequence of graduated steps at the beginning of the next segment of the signal." Sakata et al. fails to disclose all elements of the article in claim 21.

No evidence has been provided that Sakata et al. discloses *both* disengaging a filter in a sequence of graduated steps "at the end of the segment," *and* engaging a filter in a sequence of graduated steps "at the beginning of the next segment," as required by claim 21. Because no evidence has been produced, a *prima facie* case of anticipation has not been established. The § 102(b) rejection of claim 21 should be reversed at least for lack of evidence.

Nor can such a case be established, because Sakata et al. fails to disclose disengaging a filter at the end of a segment and engaging a filter at the beginning of the next segment as set forth in claim 21. The § 102(b) rejection of claim 21 is improper and should be reversed for this additional reason.

5. Claim 22:

a. Inaudibly switching filter on and/or off not disclosed:

Appellants respectfully traverse the § 102(b) rejection of claim 22 over Sakata et al. Independent claim 22 requires a method including, *inter alia*, "inaudibly switching one or more filters on and/or off during processing of an input signal by: migrating their coefficients from an original set of values to a final set of values through a series of intermediate steps." Sakata et al. fails to disclose all elements of the method in claim 22.

Filter 300 in Sakata et al. is disclosed as being operational at different points with different filter coefficients (see col. 14, lines 16-20). Such disclosure does not meet the plain meaning of "switching one or more filters . . . off" as set forth in claim 22, because there is no disclosure that either set of filter coefficients causes the filter to be switched "off." Sakata et al. also fails to disclose "switching one or more filters . . . on," because the lack of a disclosed "off"

state for filter 300 prevents the "switching . . . on" language from being met. In any event, there is no disclosure in Sakata et al. that the filter adjustment therein is "inaudibl[e]" as claimed.

The § 102(b) rejection of claim 22 is improper and should be reversed for at least these reasons.

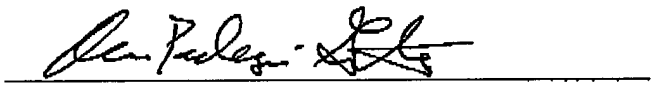
CONCLUSION

For the reasons set forth above, Appellants respectfully solicit the Honorable Board to reverse the Examiner's rejection of claims 1, 7, 13, and 19-22.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0221 and please credit any excess fees to such deposit account.

Respectfully submitted,

Dated: August 15, 2005



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VIII. CLAIMS APPENDIX

1. (original) A method of time varying filtering, comprising:

a. filtering a segment of a signal using a filter; and

b. disengaging the filter in a sequence of graduated steps at the end of the segment; and

c. repeating steps a and b until all segments have been filtered.

7. (previously presented) A method of time varying filtering, comprising:

a. engaging a filter in a sequence of graduated steps at the beginning of a signal segment;

b. filtering the segment of the signal using the filter; and

c. repeating steps a and b until all segments have been filtered.

13. (previously presented) A method of time varying filtering, comprising:

a. engaging a filter in a sequence of graduated steps at the beginning of a signal segment;

b. filtering the segment of the signal using the filter;

c. disengaging the filter in a sequence of graduated steps at the end of a signal segment; and

d. repeating steps a-c until all segments have been filtered.

19. (original) An article comprising a computer readable medium having instructions stored thereon which when executed causes:

a. filtering a segment of a signal using a filter;

b. disengaging the filter in a sequence of graduated steps at the end of the segment; and

c. repeating steps a and b until all input signal segments have been filtered.

20. (original) An article comprising a computer readable medium having instructions stored thereon which when executed causes:

a. engaging a filter in a sequence of graduated steps at the beginning of a signal segment;

b. filtering the segment using the filter; and

c. repeating steps a and b until all input signal segments have been filtered.

21. (original) An article comprising a computer readable medium having instructions stored thereon which when executed causes:

a. filtering a segment of a signal using a filter;

b. disengaging the filter in a sequence of graduated steps at the end of the segment;

c. engaging a filter in a sequence of graduated steps at the beginning of the next segment of the signal; and

d. repeating steps a-c until all input signal segments have been filtered.

22. (original) A method, comprising:

inaudibly switching one or more filters on and/or off during processing of an input signal by:

migrating their coefficients from an original set of values to a final set of values through a series of intermediate steps.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.